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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,237	12/11/2001	Steven Jan Van Raalte	NL000709	3054

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EXAMINER

NGUYEN, TRONG NHAN P

ART UNIT PAPER NUMBER

2152

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/014,237	<b>Applicant(s)</b> VAN RAALTE ET AL.	
	<b>Examiner</b> Jack P Nguyen	<b>Art Unit</b> 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1-10 are being examined.

#### ***Drawings***

Figures 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure. Applicant is requested to avoid using legal phraseology in the abstract.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

#### **Content of Specification**

Applicant is reminded to use the following format of the content of the application:

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- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.  
  
Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
  - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
  - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The

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summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

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- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

The application has omitted some key parts of the specification. The following, but not exhausting, parts and/or titles are missing: sections b, e, f, g, h, i, etc.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-7, and 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1, line 3 states, "...nodes => 4...nodes (200-1,...200-5)..." The notations "=>" and "..." between the nodes render the claim indefinite because it is unclear what is being claimed in the limitation. For the purpose of examination, Examiner interprets the notation "=>" to mean 5 nodes as depicted in the drawings while the notation "..." constitutes a continuation of the nodes; i.e., nodes 200-1, 200-2, etc. Applicant is being recommended to either delete the notation or clearly state what is being claimed in the limitation. All other claims mentioned above follow this same recommendation. Claim 8 states, "...first (200-1) and/or the last..." This renders the claim indefinite because the term 'and/or' does not ascertain clearly the condition being claimed. For examination purposes, Examiner interprets this to be the 'or' condition. Also further, claim 9 states, "...having appropriate

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cable..." The word 'appropriate' renders the claim indefinite because what is being considered 'appropriate' by one user may or may not be 'appropriate' for another user.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant admitted prior art in view of Mancusi et al, 6,418,481 (Mancusi hereafter).

As per claim 1, Applicant admitted in prior art the ring network being installed as bus network, comprising:  $n \Rightarrow 4$  nodes (200-1, . . . 200-5, fig. 4); and cable sections (100-1, 100-2, fig. 4), each of which including a forward line (105-1, 105-4, fig. 4) and a return line (110-1, 110-4, fig. 4) for transmitting a signal in opposite directions within said cable section (fig. 4, page 1, paragraphs 0002, 0003, 00014; fig. 4 is being admitted as prior art); wherein at least two of said nodes are intermediate nodes (200-2, 200-3, 200-4, fig. 4) being respectively connected between two of said cable sections such that the intermediate nodes are arranged in a sequential order, wherein a network interface (230, fig. 5) of each of said intermediate nodes (200-2, 200-3, 200-4, fig. 4) is connected either between the forward lines (105-1, 105-4, fig. 4) (page 1, paragraph 0005); and wherein the first (200-1, fig. 4) and the last (200-5, fig. 4) of said nodes are respectively connected to only one of said cable sections (100-1, 100-4, fig. 4) and

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serve for closing the ring network by respectively connecting said return line (110-1, 110-4, fig. 4) with the forward line (105-1, 105-4, fig. 4) of said only one cable section (fig. 4, page 1, paragraph 0006; nodes 200-1 & 200-2 are closing nodes of the ring network). Applicant admitted prior art does not show two sequential intermediate nodes the respective network interfaces are connected alternately between the forward lines and the return lines of two connected cable sections. In an analogous art to the claimed invention, Mancusi teaches an optical fiber ring network (30, 36, fig. 1; col. 4, lines 49-50; col. 6, lines 42) having a system with a programmable switching mechanism that can be configured to select the data ports (via data lines) to transmit and receive data (col. 2, lines 8-11; each port is used to connect to a node on the network); the programmable switching mechanism (40, fig; switching mechanism is represented by a multiplexer 'mux') is coupled both to a network interface and the data lines (represented by token ring information 'TRI' bus; 30, fig. 2); the switching mechanism can be programmed to select to data signal bus that is connected to a plurality of signal lines; the switching mechanism can be configured to select the data lines (port) that it wants to connect to (col. 5, lines 50-58). Thus switching mechanism allows data to be transferred in either direction in a network node (via forward or return lines). Hence, it would have been obvious to one of ordinary skill in the art to modify the teachings of Mancusi to control the flow of data between the nodes leading to greatly improved signal quality on the line thereby expanding the distance that two sequential nodes can be connected as disclosed by Mancusi in col. 6, lines 5-9.

As per claims 2-5, Applicant admitted in prior art each of the intermediate nodes



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(200-2, fig. 4) comprises at least one connector (210, fig. 5) for being connected said two connected cable sections (100-1, fig. 4); one connector (210, fig. 5) of each intermediate node (200-2, fig. 4) comprises a first input terminal (210a, fig. 5) for connecting the forward line (105-1, fig. 4) of a first one of said two cable sections (100-1, 100-2; fig. 4) to the intermediate node, a first output terminal (210b, fig. 5) for connecting the return line of said first cable section, a second input terminal (220a, fig. 5) for connecting the return line of the second one of said two cable sections and a second output terminal (220b) for connecting the forward line of said second cable section to the intermediate node (see fig. 5); the network interface (230, fig. 5) of one intermediate node (200-2, fig. 4) is connected between said first input (210a, fig. 5) and the second output terminal (220b, fig. 5), said intermediate node comprises a jumper (240, fig. 5) for connecting the second input (220a, fig. 5) with the first output terminal (210b, fig. 5) (see figs. 4 & 5, page 1, paragraph 0012).

As per claims 6-7, Mancusi teaches a multiplexer (40, fig. 2; switching mechanism) connecting the network interface (39, fig. 2) between the input terminals via a ring bus (30, fig. 2) in response to control signals (col. 5, lines 50-58; col. 5, line 67 – col. 6, lines 5; the controller instructs the switching mechanism to control the direction of the data flow between the ports of the nodes; i.e., control signals in the lines may be inverted or flowed in opposite direction from node to node depending on the instructions from the controller).

Claims 8-9 are rejected for similar reasons as claims 2-5 addressed above.

Applicant further admitted in prior art the first (200-1) node (200-5) comprise a loop back

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terminator (115, fig. 4) for connecting the received forward line (105-1, fig. 4) (page 1, paragraph 0006).

Claim 10 is rejected for similar reasons as claim 1. However, Applicant does not admit in prior art the nodes are connected using fiber optic cables, thus requiring fiber optical transceivers (FOT) used as connectors between the nodes. In an analogous art to the claimed invention, Mancusi teaches the nodes are connected in an optical fiber ring network (30, 36, fig. 1; col. 4, lines 49-50; col. 6, lines 42; it's inherent that FOT are used to connect the nodes in a fiber optic ring network). Hence, it would have been obvious to one of ordinary skill in the art to connect the nodes using fiber optic cables as a design choice to increase the speeds of the network.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Godfrey et al, 6,111,859; Hutchison et al, 6,728,486; Milton et al, 6,493,117 ; Mancusi et al, 6,681,261 ; Binder, 6,480,510 ; Lambrecht et al, 6,275,975 ; Hartmann et al, 5,905,873 ; Wu, 5,442,623 ; Konishi, 4,727,601 ; Coden, 6,389,030 ; Romano et al, 6,661,805 ; Allan et al, 6,333,798 ; Beine et al, 6,304,347


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack P Nguyen whose telephone number is (571) 272-3945. The examiner can normally be reached on M-F 8:30-5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jpn



Dung C. Dinh  
Primary Examiner